Frederick National Laboratory
for Cancer Research

Implementation of the RAS Program

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The Frederick National Laboratory is a federally funded research and development center operated by SAIC-Frederick, Inc., for the National Cancer Institute
DEPARTMENT OF HEALTH AND HUMAN SERVICES • National Institutes of Health • National Cancer Institute

Frederick National Laboratory Missions
What is RAS, and why is it so important?

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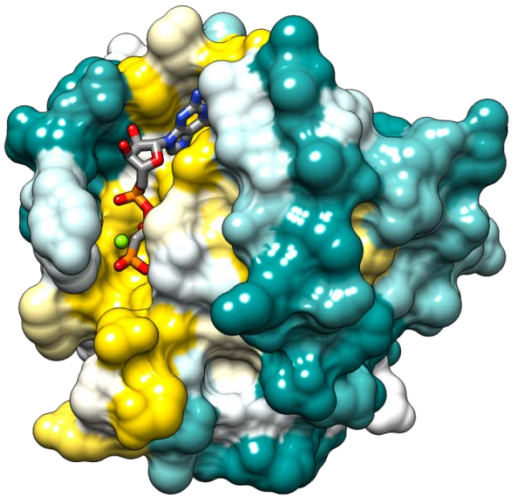
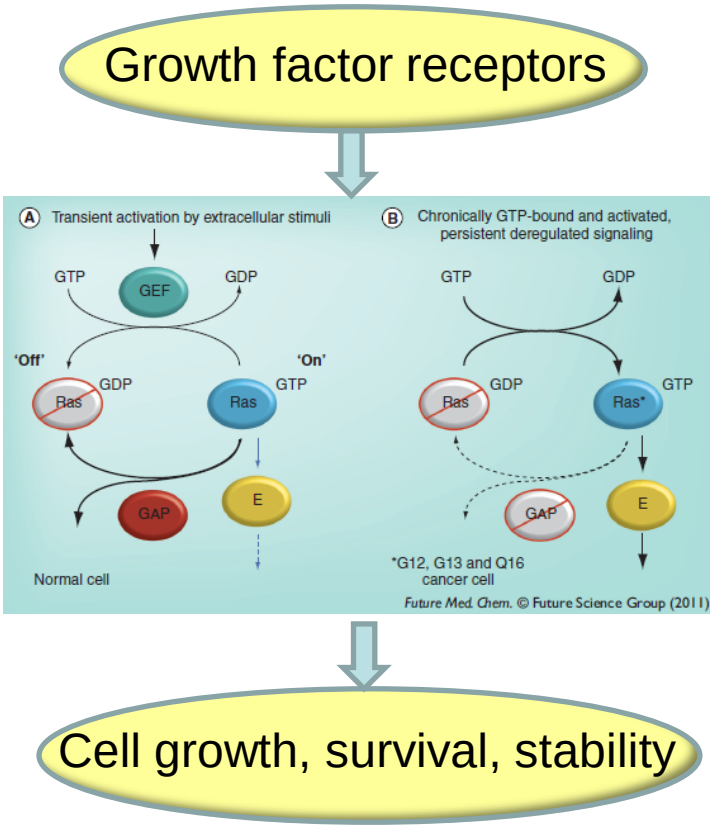
RAS stands for Rat Sarcoma viral oncogene homolog, and is a protein which is a key regulator of signal transduction in normal and cancerous cells

- Four flavors : Harvey, Kirsten (A & B), and Neuroblastoma



HRAS
(Wikimedia commons)



Mutated RAS is found in ~33% of human cancers, is currently undruggable, and enables resistance to many existing cancer therapies

Etiology of the RAS Program at FNLCR

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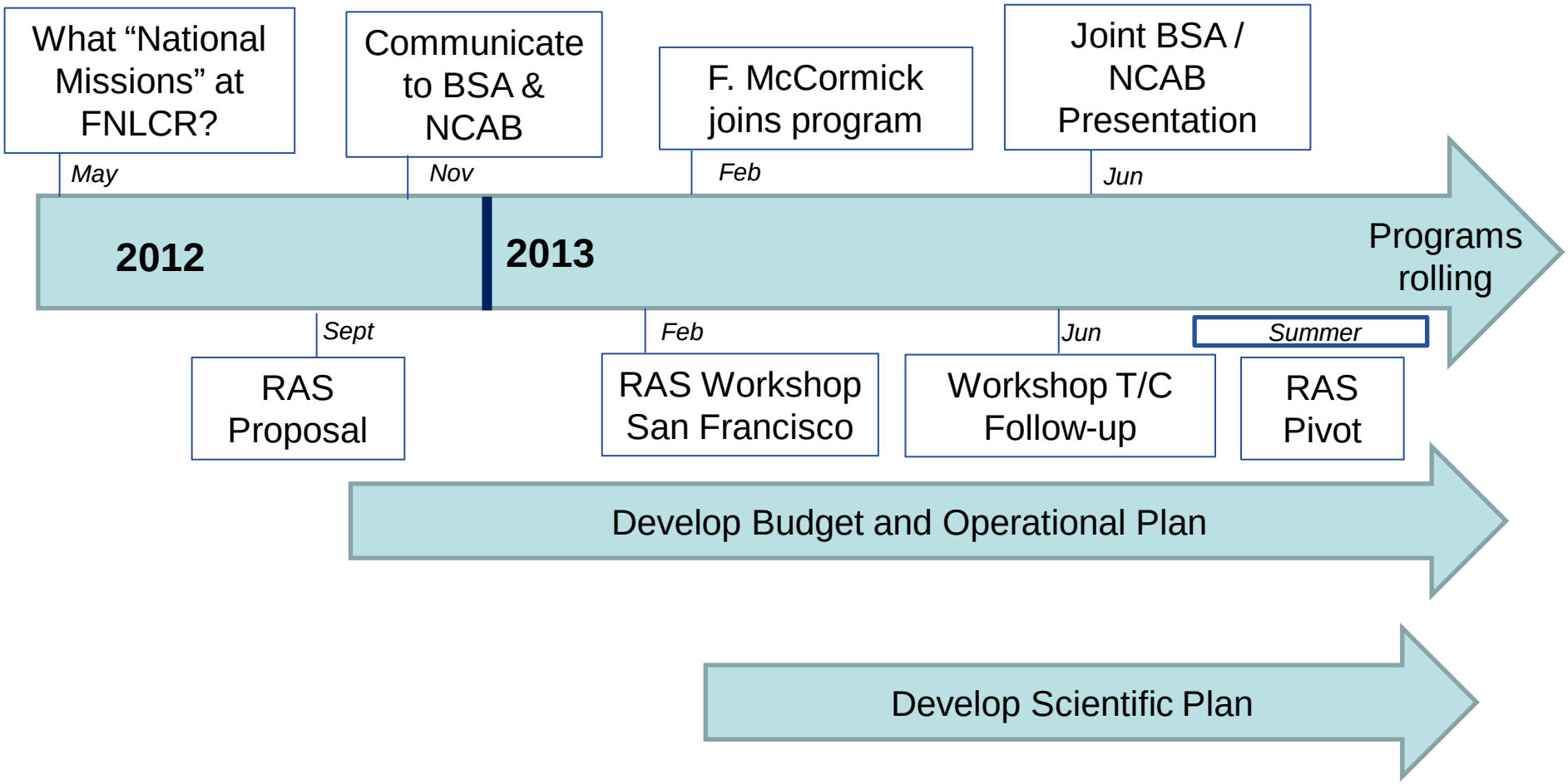

Full-Spectrum Research & Development at FNLCR

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Research & Development

- **Basic Research**: New knowledge about AIDS and cancer
- **Applied R&D**: New diagnostics and therapeutics
- **Clinical Research:** Clinical trials and laboratory analysis
- **cGMP manufacturing:** Biologicals and vaccine production

Specialties

- Genomics, proteomics, and metabolomics
- Bioinformatics and imaging
- Nanotechnology
- Animal models
- Tumor cell biology and virology
- Immunology and inflammation

Customers

- NCI, NIH, and external academic and commercial biomedical scientists

All FNLCR assets and expertise are available to the RAS program

Implementing "National Missions" at FNLCR
The RAS Hub

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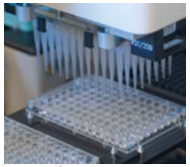
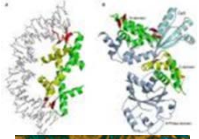
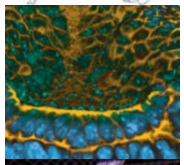
Essential capabilities….



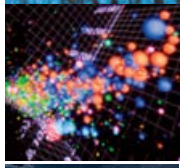
Genetics and Genomics



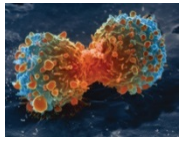
Proteins and Proteomics



Imaging and Nanotechnology



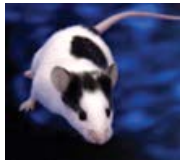
Advanced Biomedical Computing



Cell Biology

…integrated into a brand new state-of-the-art Research Facility

Advanced Technology Research Facility
Opened June 2012



Integrated *in vivo* support at Frederick & Bethesda

Operationalizing the RAS Program
Hub and Spoke model

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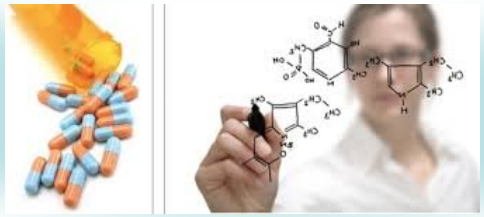
Intramural Labs

Extramural NCI-Supported Labs

FNLCR – The Hub

Biotechs



Pharma

Contract Research

Hub Partnerships Facilitated through NCI and Contractor Mechanisms

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Material Transfer Agreement (MTA)

- Research materials transferred (in or out); research plan
- No fees; No joint IP

Technical Services Agreement

- Purchase of contractor-developed assays or reagents
- Minimal paperwork; Assay list online
- Cost recovery only

Collaboration Agreement

- Research materials transferred (in or out);
- Research plan developed
- Both contribute intellectually; no $$ to NCI

Cooperative Research & Development Agreement (CRADA)

- R&D collaboration both partners contribute intellectually
- Both contribute resources; can include $$ to NCI
- Both NCI and Contractor mechanisms

http://frederick.cancer.gov/

The RAS Program
Funding Model

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- **Funding for FNLCR RAS Hub**
  - Approximately $10 M / yr from NCI-directed re-prioritization of ongoing activities within the existing FFRDC contract - *No new money*
    - The Advanced Technology Program "Pivot" re-orients a predominantly intramural effort towards driving the RAS Hub
    - Additional "one-time" funds from within the existing contract facilitate start-up activities
  - This funding supports ongoing research activities within the Hub, as well as initial phase of subcontracts between the Hub and external laboratories

- **Funding for RAS Spokes**
  - Contract Research Organization – subcontracts from FNLCR RAS Hub
  - Pharma, Biotech – Self-funded
  - Academic : Some subcontracts from FNLCR RAS Hub;
    - Existing and future grantees working on RAS will have the opportunity to participate in RAS program

The RAS Program
Oversight and Governance

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- **Oversight**
  - An NCI-Frederick Advisory Committee (NFAC) subgroup will be formed
    - Will include NFAC members and representatives from academia and industry (TBD)

- **Research Program Prioritization**
  - Joint recommendations by RAS Program leadership (Frank McCormick and SAIC-F leadership) and RAS Program oversight group, with concurrence by NCI Leadership (Drs. Varmus and Lowy)